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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/763,789

01/23/2004

David W. Herbage

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WYATT, TARRANT & COMBS, LLP  
1715 AARON BRENNER DRIVE  
SUITE 800  
MEMPHIS, TN 38120-4367

EXAMINER

LEE, BENJAMIN P

ART UNIT

PAPER NUMBER

3641

MAIL DATE

DELIVERY MODE

12/24/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/763,789	<b>Applicant(s)</b> HERBAGE ET AL.	
	<b>Examiner</b> BENJAMIN P. LEE	<b>Art Unit</b> 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6,8,9,11-16,18,19 and 43-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 43-52 is/are allowed.
- 6) ☒ Claim(s) 1-6,8,9,11-16,18,19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Applicant has amended claims 1, 13, 18 and 43 and canceled claims 7, 10, 17 and 20-42 in after final amendment dated 11/10/2008 which is hereby entered. Further search and consideration has yielded newly found prior art. Accordingly, Examiner's previous indication of allowability is hereby withdrawn. Examiner regrets any delay in prosecution.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-6, 8, 9, 11-16, 18, 19 and 43-52 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Ennis et al. (U.S. Patent 1,758,358).

Art Unit: 3641

4. In regards to claim 1, Ennis et al (henceforth referred to as Ennis) disclose an energetic pellet assembly for providing at least one of visual and infrared energy output, said flare pellet assembly comprising:

at least first and second ignitable flare pellets arranged in a stack (see items "A" of Ennis figure 1). Note that the pellets of Ennis are capable of providing a visual energy output constituting a "flare";

a rod that extends through said first and second ignitable flare pellets (item 22).

Note that Ennis teaches that item 22 is a "needle or rod" and extends through the pellets (page 1, col. 1, lines 12-16);

a protrusion on one of said first ignitable flare pellet and said rod (item 20 of Ennis figure 2);

a depression or groove complimentarily configured to accommodate said protrusion on another of said first ignitable flare pellet thereby preventing rotation of said first ignitable flare pellet relative to said rod (item 21 of Ennis figure 2).

5. In regards to claim 2, disclose that at least one of said first and second ignitable flare pellets comprises a frustum.

6. In regards to claim 3, Ennis discloses that at least one of said first and second ignitable flare pellets is substantially disk shaped (see Ennis figure 1). Note that the form of the pellets of Ennis constitutes a disk (circular cylinder).

7. In regards to claim 4, Ennis discloses that said first and second ignitable flare pellets are substantially identical in size and design (see Ennis figure 1). Note that the pellets of Ennis are substantially the same size.

8. In regards to claim 5, Ennis discloses that said first and second ignitable flare pellets are affixed to each other. Note that Ennis teaches that all of the pellets are wrapped together in an oil paper which constitutes the pellets being "affixed" to each other (page 1, col. 2, lines 83-97).

9. In regards to claim 6, Ennis discloses means for substantially immobilizing said first ignitable flare pellet relative to said second ignitable flare pellet. Note that Ennis teaches wrapping the pellets together which constitutes a substantial immobilization of the pellets relative to each other (page 1, col. 2, lines 83-97). Further, Ennis teaches a protrusion (tongue) from one pellet inserted into a groove of another pellet to provide immobilization (page 2, col. 1, lines 10-20).

10. In regards to claim 8, Ennis inherently discloses at least one of said first and second ignitable flare pellets is affixed to said rod. Note that Ennis teaches the rod and disks are wrapped in oil paper as a consolidated assembly whereby all components are "affixed" to each other.

Art Unit: 3641

11. In regards to claim 9, Ennis discloses means for preventing rotation of said first ignitable flare pellet relative to said rod. Note that the tongue and groove configuration prevents rotation of the flare pellets and further note that the oil paper wrap prevents the disks from rotating relative to the rod.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brum et al. (U.S. Patent 6,510,798).

13. In regards to claim 11, Ennis fails to disclose that said rod comprises a stop at a first end of said rod and a threaded second end of said rod. However, Brum et al

Art Unit: 3641

(henceforth referred to as Brum) teaches a threaded screw rod extending through multiple disks (see Brum figure 9 following) with a "stop" at one end (item 60 or 86 of Brum figures 9 and 10 "separator plate" or "end nut"). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to utilize a screw rod with a threaded portion and a stop portion as taught by Brum in place of the rod of Ennis to better consolidate and secure the pellets of Brum.

14. In regards to claim 12, Ennis as modified by Brum discloses a threaded fastener (item 86 of Brum figure 9) engaged with said threaded second end of said rod, and wherein said first and second ignitable flare pellets are disposed between said stop of said rod and said threaded fastener. Note that the Ennis device as modified by Brum includes a screw rod, separator plate and bolt (see Brum figures 9 and 10).

15. Claims 13-15 and 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Callaway et al. (European Patent Application GB 2 387 430) in view of Brum et al. (U.S. Patent 6,510,798) and in further view of Brice et al. (U.S. Patent 6,092,467).

16. In regards to claim 13, Callaway et al (henceforth referred to as Callaway) disclose a pyrotechnic flare pellet assembly for providing at least one of visual and infrared energy output (page 2, line 26), said pyrotechnic flare pellet assembly comprising:

Art Unit: 3641

a plurality of pyrotechnic flare pellets made of at least one ignitable material.

Note that Callaway teaches multiple flare pellets (items 11 of Callaway figure 1 and 2 following);

plurality of pyrotechnic flare pellets are disposed along a longitudinal reference axis (see Callaway figure 1);

a plurality of tapered grooves defined between each of said plurality of pyrotechnic flare pellets (items 15 of Callaway figure 2);

of said tapered groove tapers toward said longitudinal reference axis

Callaway fails to teach a rod that extends through said plurality of flare pellets.

However, Brum et al (henceforth referred to as Brum) teaches a flare pellet “decoy” pod with a rod “drive screw” extending through the "pellets" (see Brum figure 9 following). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to utilize a packaging screw rod as taught by Brum to consolidate and help maintain the "pellets" in a specific configuration;

Callaway fails to explicitly teach that the grooves are tapered. However, Brice et al (henceforth referred to as Brice) teaches a rounding of an exposed area of a flare composition consistent with Applicant's pellet surface. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to incorporate a “rounding” or tapering of the flare pellet grooves of Callaway in a manner consistent with Brice for the purpose of increasing the burn surface area and thus increasing the heat signature of each “pellet” (disk).



Art Unit: 3641

17. In regards to claim 14, Callaway as modified fails to explicitly disclose that said plurality of tapered grooves comprises a plurality of interior angles between about 5° and about 35°. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the tapered grooves of Callaway as modified with any of various interior angles including between about 5° and 35°, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Aller*, 105 USPQ 233.

18. In regards to claim 15, Callaway as modified discloses that said plurality of tapered grooves is annularly disposed about said longitudinal reference axis. Note that Callaway teaches multiple grooves that are annularly disposed about the longitudinal axis of the flare pellet assembly (see Callaway figures 1 and 2).

19. In regards to claim 18, Callaway as modified discloses that at least one of said plurality of flare pellets is affixed to said rod. Note that the disks of Callaway as modified with the screw rod of Brum are taught to be secured to the screw rod and case via an end bolt (see Brum figure 9). Further, the flare pellet assembly of Callaway is closed and secured via a lid and as modified by Brum, the pellets incorporate a screw rod.

Art Unit: 3641

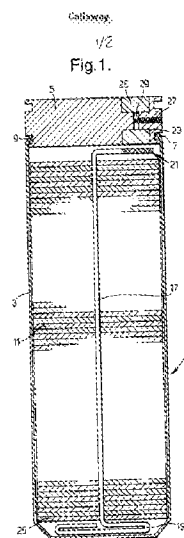
20. Claims 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Callaway et al. (European Patent Application GB 2 387 430) and Brum et al. (U.S. Patent 6,510,798) and Brice et al. (U.S. Patent 6,092,467) as applied to claim 13 above, and further in view of Ennis et al. (U.S. Patent 1,758,358).

21. In regards to claim 16, Callaway fails to disclose means for substantially immobilizing each of said plurality of flare pellets relative to each other. However, Ennis teaches a tongue and groove configuration where one pellet has a protrusion (tongue) and the next pellet has a groove that fit together (see Ennis figure 2 following). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to incorporate a tongue and groove configuration into the disks of Callaway as taught by Ennis to immobilize the disks.

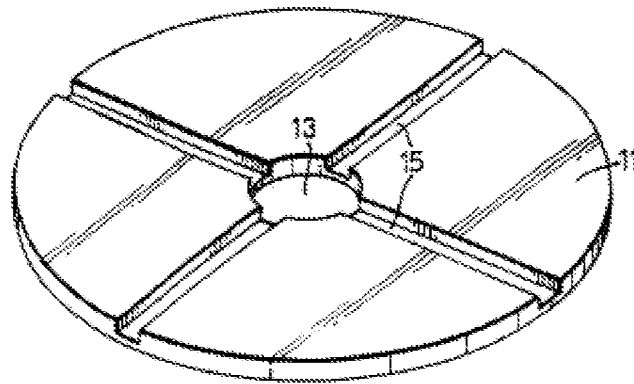
22. In regards to claim 19, Callaway fails to explicitly disclose means for preventing rotation of at least one of said flare pellets relative to said rod. However, Ennis teaches a tongue and groove configuration where one pellet has a protrusion (tongue) and the next pellet has a groove that fit together (see Ennis figure 2 following) to prevent rotation of the pellets relative to each other. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to incorporate a tongue and groove configuration into the disks of Callaway as taught by Ennis to immobilize the disks.

**Allowable Subject Matter**

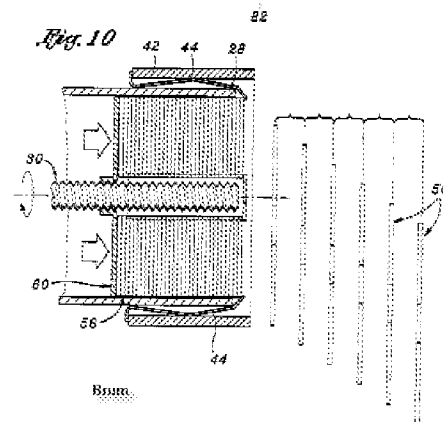
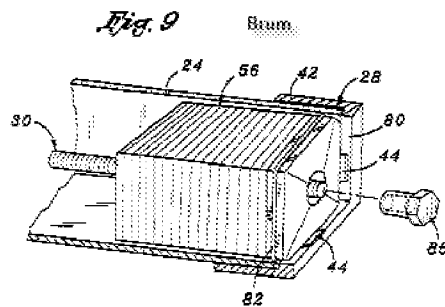
23. Claims 43-52 are allowed. The following is a statement of reasons for the indication of allowable subject matter: With respect to claim 43, the closest prior art fails to teach, each of said plurality of pellets having tapered edges whereby the center of each of said plurality of pellets is thicker than the edges of the pellet and a plurality of tapered grooves defined between said tapered edges of said pellets.

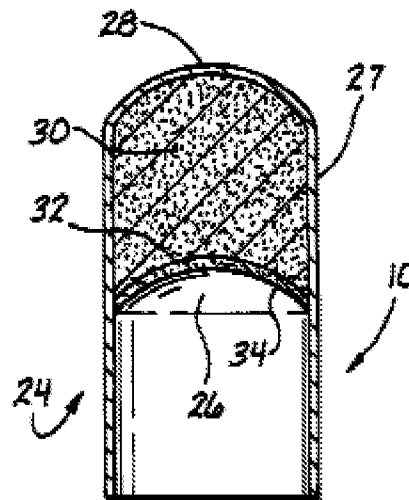


**Fig. 2.**



Callaway





**FIG. 2**

Brice

***Summary/Conclusion***

**24.** Claims 1-6, 8, 9, 11-16, 18 and 19 are rejected. Claims 43-52 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin P. Lee whose telephone number is 571-272-8968. The examiner can normally be reached between the hours of 8:30am and 5:00pm on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3641

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/B. P. L./

Examiner, Art Unit 3641

/Michael J. Carone/

Supervisory Patent Examiner, Art Unit 3641